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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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November 11, 1992

TO: Minerals File

FROM: Holland Shepherd, Senior Reclamation Specialist *HS*

RE: Site Inspection, Barney's Canyon Gold Mine and Exploration Project,  
M/035/009 and E/035/002, Kennecott Corporation, Salt Lake County, Utah

Date of Inspection: November 9, 1992  
Time of Inspection: 2:00 p.m. - 5:00 p.m.  
Personnel: Bill Gunter, Senior Geologist, Kennecott, Holland Shepherd, DOGM  
Conditions: Cloudy, cold

The purpose of this inspection was an evaluation of the operator's annual reclamation activities, related to the ongoing Barney's Canyon Large Exploration permit. The operator carries a \$103,700 surety on the exploration project, which covers approximately 40 acres of disturbance. The operator's development and reclamation activities this year are intended to maintain the balance of disturbed acreage under 40 acres. Another aspect of this inspection was to evaluate the initial mining activity associated with the operator's new mine expansion.

## Exploration

The operator has been actively reclaiming portions of the reclamation project in sections 25 and 36, T2S, R3W and sections 1 and 2, T3S, R3W. The operator plans to complete approximately 12 acres of reclamation this fall.

The reclamation is being performed with a large 235 back/trackhoe, the trackhoe has a 24 ft radius of reach. The trackhoe is being operated by Jim Neilson of W.W. Clyde. W.W. Clyde has contracted with the operator to perform the exploration reclamation (see photos in the mine file).

Use of the trackhoe has allowed the operator to recontour, steep road and pad cuts, back to the existing natural contour (@ 1.5h:1v, in places). The trackhoe is used to

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pull woody vegetation (trees and shrubs) onto reclaimed areas. This allows for extra erosion control, mulch and revegetation (from woody plant root material and remnant native seeds) on the disturbed areas. This is a form of live topsoil transfer, that has proven very successful at other reclamation sites in the West. The reclaimed area is broadcast seeded after recontouring. It is estimated that this technique will provide for nearly complete restoration of these sites over a five to ten year period.

As part of this inspection we visited some of the exploration sites, reclaimed last fall of '91. These sites were reclaimed using the same method described above. The vegetative regrowth on these areas is very impressive for sites that are only a year old. Several of the grasses, forbs and shrubs planted last year have grown substantially this year: bluebunch wheatgrass, intermediate wheatgrass, Great Basin wildrye, bluegrass, yarrow, rabbitbrush, and sage. The reclaimed sites have also produced a bumper crop of mullein, a weedy species which was not in the seed mix, but beneficial to the reclamation of the site.

The operator plans to continue reclaiming steep sloped areas that will not be affected by the future Barney's Canyon mine expansion. Reclamation will continue as long as the weather holds up this fall.

As part of the operators mining and exploration reclamation program, Kennecott has been backfilling and sealing old mine adits and shafts. These are typically discovered during the operators exploration activities. Once encountered they are evaluated for values, then eventually reclaimed. The effort is completely voluntary on the part of the operator.

Bill Gunter and I discussed bringing the exploration plan up to date, by the first of the year. The operator has committed to supplying the Division with a formal annual report of the Barney's Exploration project, as part of the approved exploration plan. Based on my evaluation during this inspection, there should be no problem with maintaining the surety, as is, and obtaining good to excellent reclamation on the sites that have already been completed.

## **Mine Operation**

We looked briefly at an area located in the vicinity of the proposed BC South mine pits. The area will eventually be used for pit waste disposal. It is being scrapped for soil salvage and consists of steep slopes and valleys. The soils are deepest in the valley

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bottoms. They are being scrapped off by dozers then removed to a stockpile area by scrappers.

Another area associated with the mine, which we looked at, was a reclaimed clay barrow area. The area is composed of steep slopes and contains a sediment pond at the base. The area has been reseeded, but contains little plant growth at this time. Also, the bare steep slopes exhibit a number of deep erosion gullies. The pond no doubt, acts to contain a large portion of the sediments which would otherwise wash downstream. It also contains water beneficial to the deer and elk, which frequent this area in large numbers. Alternate water sources help to keep the animals out of the process area.

The operator is currently applying the liner system to the BC3 leach pad area (see photos in the mine file).

jb  
cc: Bill Gunter, Kennecott  
E035002